COCHIN LEGISLATIVE COUNCIL PROCEEDINGS.

(OFFICIAL REPORT)

LEGISLATIVE SESSION OF VRISCHIGAM 1102.

Tuesday, the *30th of November 1926.*
15th of Vrischigam 1102.

The Council assembled in the Town Hall, Ernakulam, at 11-30 a. m. on the 30th of November 1926, corresponding to the 15th of Vrischigam 1102, the Diwan being in the Chair. Messrs. K. Krishna Menon, Lonappan Chakkola, P. Munda Vaidyan and Poulo Mampilli were absent. The proceedings began with Questions and Answers.

QUESTIONS AND ANSWERS.

Irrigating Pallur and Desamangalam villages from the Bharatapuzha.

29. മിസ്റ്റർ കെ. ശങ്കരൻ നമ്പൂതിരി.—(a) ഭാരതപ്പുഴയിൽ നിന്നും ഓയിൽ എഞ്ചിൻ വെച്ചു് ജലസേചനമുണ്ടാക്കുന്നപക്ഷം ദേശമംഗലം, പല്ലൂർ, ഈ വില്ലേജുകളിലായി ഒരായിരത്തോളം ഒരുപ്പു നിലം ഇരുപ്പുനിലമാക്കുവാൻ സാദ്ധ്യമാണെന്നു് കാണിച്ചും ഈ കാര്യത്തിൽ ഗവമ്മേണ്ടിന്റെ സഹായം അപേക്ഷിച്ചും കഴിഞ്ഞ പന്ത്രണ്ടു കൊല്ലങ്ങൾക്കിടയിൽ വല്ല ഹർജികളും ഗവമ്മേണ്ടിനു് കിട്ടീട്ടുണ്ടോ എന്നും,

(b) ഉണ്ടെങ്കിൽ ഈ കാര്യത്തെ പറ്റി വല്ല അന്വേഷണങ്ങളും നടത്തീട്ടുണ്ടോ എന്നും ദയവു ചെയ്തു പറയാമോ?

(c) ഈ കാര്യത്തെ പറ്റി വല്ല അന്വേഷണങ്ങളും നടത്തീട്ടുണ്ടെങ്കിൽ അതു ഏതേതു കാലത്താണെന്നും ഏതെല്ലാം ഉദ്യോഗസ്ഥന്മാരാണെന്നും സഭയെ അറിവിക്കുന്നതിനും അന്വേഷണം നടത്തിയ ഉദ്യോഗസ്ഥന്മാർ സമർപ്പിച്ചിട്ടുള്ള റിപ്പോർട്ടുകൾ മേശപ്പുറത്തു് വെക്കുന്നതിനും ഗവമ്മേണ്ടിനു് ദയവുണ്ടാകുമോ?

(d) മിസ്റ്റർ ഭോർ ദിവാൻജി ആയിരുന്ന കാലത്തു് ഇതിനെ സംബന്ധിച്ചു ചെയ്തിട്ടുള്ള തീരുമാനം എന്താണെന്നു് സഭയെ ധരിപ്പിക്കുവാൻ ഗവമ്മേണ്ടിനു് അനുകമ്പ ഉണ്ടാകുമോ?

റാവു സാഹിബ്ബു് മിസ്റ്റർ ടി. വി. കൃഷ്ണയ്യർ.—(a) ഉവ്വു.

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(b) ഉവ്വ്.

(c) ഫൊർട്ട്, പെരുമ്പടപ്പ് ഈ കാലങ്ങളിൽ തഹസിൽദാർ, ഡിവാൻപേഷ്കാർ, ചീഫ് എഞ്ചിനീയർ എന്നീ ഉദ്യോഗസ്ഥന്മാർ ഈ കാര്യത്തെപ്പറ്റി അന്വേഷണം നടത്തീട്ടുണ്ട്. ഇവർ സമർപ്പിച്ച റിപ്പോർട്ടുകളുടെ പകർപ്പ് അനുബന്ധത്തിൽ ചേർത്തിട്ടുണ്ട് (ക-ാം അനുബന്ധം നോക്കുക.)

(d) മറ്റു ചില പണികളുടെ കൂട്ടത്തിൽ ഇതിനേയും ചേർത്ത് വിസ്താരമായി അന്വേഷണം നടത്തേണ്ടതാണ് എന്നാണ് മിസ്റ്റർ ഷോർ തീരുമാനിച്ചത്. ഫൊർട്ട് മുഷിക്കാൻ-ാംനമ്പരിലെ 'സർവ്വേ' നോക്കുക.

Malayalam text—books for schools.

30. മിസ്റ്റർ കെ. ശങ്കരൻ നമ്പൂതിരി.— കൊച്ചിഭാഗീമയിലുള്ള വിദ്യാലയങ്ങളിൽ ഈ സ്ഥലം കൊല്ലാരംഭംമുതൽ പഠിപ്പിക്കുന്നതിനു തിരഞ്ഞെടുത്തിട്ടുള്ള പാഠ്യപുസ്തകങ്ങളിൽ മലയാളം പുസ്തകങ്ങളെ സംബന്ധിച്ചു താഴെ ചേർക്കുന്ന വിവരങ്ങൾ അടങ്ങിയ ഒരു സ്റ്റേറ്റുമേണ്ടു മേശപ്പുറത്തു വെയ്ക്കുവാൻ ദയവുണ്ടാകുമൊ?

ക. പുസ്തകത്തിന്റെ പേർ.
ഖ. ഏതു ക്ലാസ്സിലേക്കു എന്നു.
ഗ. പുസ്തകത്തിലെ വിഷയം.
ഘ. ഗ്രന്ഥകർത്താവിന്റെ പേർ.
ങ. പ്രസാധകന്റെ പേർ.
ച. അച്ചടിച്ച പ്രസ്സിന്റെ പേർ.
ഛ. പുസ്തകത്തിന്റെ വില.

മിസ്റ്റർ സി. മത്തായി.—ഖ-ാം അനുബന്ധം നോക്കുക.

Scout expenditure.

31. Mr. C. A. Kunjunni Raja.—Will the Government be pleased to state the various items on which a sum of Rs. 9,923—6—11 has been spent besides Rs. 15,000 spent for the construction of the Scout Head-quarters building referred to in the answer given by the Government to question 270 (e) of the legislative session of the Council?

Mr. C. Matthai.—A statement furnishing the information is appended. (*Vide Appendix III.*)

New appointments in the Maharaja's College.

32. Mr. C. A. Kunjunni Raja.—Will the Government be pleased to furnish information on the following :—

(a) the names of the new hands entertained in the College department of the Maharaja's College, Ernakulam, during the latter half of 1101;

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APPENDIX I.

(*Vide Answer to Question No. 29*).

Report, S. C. No. 505, dated 29th March 1917, from the Diwan Peishkar:

With reference to the correspondence ending with your Official Memorandum, dated 3rd March 1917, C. No. 644/92, I have the honour to forward herewith for the consideration of the Darbar a copy of the Talappalli Tahsildar's report, dated 20th March 1917, S. C. No. 705/92, containing his proposals for the improvement of wet cultivation in his taluk.

2. The Tahsildar's report is the revised one drawn up by him in accordance with the instructions issued by me personally to him in Thulam last. Reference is solicited in this connection to the remarks made by me in my tour diary for the month of Thulam (28th and 29th of that month). On examining the Tahsildar's report, I find that he has embodied in it all the schemes to which I had drawn his attention in the course of my tours. I have, therefore, very little to add to the Tahsildar's report. I have, however, made a few marginal notes.

3. A tabular statement giving detailed particulars of the schemes proposed and sketches (103 in number) illustrating the same are enclosed.

4. Of the 120 items of works included in the tabular statement, 51 find a place in the printed list of Major and Minor Irrigation works and should therefore receive attention from the P. W. or Land Revenue Departments, as the case may be, according to requirements as funds permit.

Copy of the Talappalli Tahsildar's report dated 20th March 1917, S. C. No. 705/92, containing his proposals for the improvement of wet cultivation in his taluk.

"With advertence to your memorandum dated 29th November 1915, Ref. on S. C. No. 505/91, calling for a report on the improvement of wet cultivation in this taluk on the lines indicated in the Diwan's Proceedings dated 20th November 1915, Ref. on C. No. 132/1091, I have the honour to submit the following report.—

2. On receipt of the Diwan's order referred to above, enquiry was instituted with a view to ascertain the agricultural conditions prevailing in the different parts of this taluk, and in that connection, every endeavour was made to obtain first-hand information regarding the present condition of the existing sources of irrigation. Attention was specially directed towards existing defects and drawbacks, and suggestions made by ryots as to the ways and means to be adopted for remedying them were duly considered. Proposals regarding a few new schemes were also considered. The results of the enquiry are set forth in the following paragraphs under the three main lines indicated in the Diwan's Proceedings referred to in para 1.

3. As a clear comprehension of the agricultural conditions prevailing in this taluk is a *sine qua non* to the consideration of the question of improving wet cultivation, a reference to the Diwan's printed Memorandum, dated 28th June 1908, describing the agricultural conditions in the State and indicating the general lines on which improvements of agriculture should proceed, will be at once interesting and instructive. The lands of this taluk are comprised mainly in tracts II, III and IV, but a thin fringe of tract VI is also in evidence in the westernmost extremity. The whole taluk undulates from east to west, and more than a third of its area is taken up by hills and forests known as Matchad and Elanad ranges. These are situated in the eastern and north-eastern portions of the taluk, and although the permanent way of the Cochin State Railway may be fairly taken as the line of demarcation separating the hilly parts from the plains, the Matchad hills send 2 offshoots across the Railway line, running in a north-westerly

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direction almost parallel to each other and enclosing between themselves the villages of Mullurkara, Varavur, Pulakad, Arangottukara, Tichchur and Talasseri. The southern of these two spurs runs as far west as Kadangode. The middle tract or tract III lies mainly all to the west of the Railway line, and it extends up to the *Kole niloms* situated in some of the westernmost villages. The *Kole* lands which are not of very considerable extent found in the Kattakampal, Palanji, Mangad and Kunnamkulam villages form tract IV, while tract VI is fairly well represented in the sandy portions of the Anjur, Artat and Kandanasseri villages

4. With a few exceptions here and there, almost all the *niloms* situated in tracts II, III and VI have two crops raised on them every year, namely Virippu and Mundakan, harvested in Kanni and Makaram respectively. In the *Kole niloms* only one crop, viz. *Puncha* is raised, and the same is harvested in the month of Medam. The two besetting disadvantages which the economy of nature has imposed upon Malabar are shared by this taluk in common with the rest of the State, and they are (1) that the lie of the land is everywhere aslant to the sea-board, and (2) that the soil is incapable of retaining moisture for any considerable length of time. In result, the rainfall though abundant loses much of its utility, and the ryots are completely at the mercy of the capricious monsoons for the successful cultivation of their lands. Viruppu cultivation depends entirely upon timely showers during the south-west monsoon, and Mundakan is foredoomed to failure in the absence of adequate rainfall during the north-east monsoon. Although it is not given to man to override Nature or to correct Her freakly ways, human ingenuity and enterprise have never stopped short of accomplishing whatever is possible even under adverse conditions, and attempts made for the storage of water by deepening tanks and reservoirs and by bunding up streams and rivers bear ample testimony to the spirit of enterprise that actuates ryots in the pursuit of agriculture. There are numerous tanks of smaller size but very few *Eries* or reservoirs of large size, as the latter have been found on experience to be ill-adapted to the conditions of soil prevailing in this taluk. In this respect this taluk presents a contrast to the Chittur Taluk where *Eries* play no small, part in the matter of irrigation. Tanks, on the other hand, though small are numerous and lie scattered over paddy flats, and such of them as have springs in them have invariably proved to be the mainstay of the ryots in times of draught.

These small tanks situated at the heads of narrow valleys play a prominent part in the irrigation of wet lands in this taluk.

Coming to rivers, it will be found that there are 3 (three) of them in this taluk, the most important being the Bharatapuzha or the Ponnani river which forms the northern boundary of the taluk. The Cheerakkuzh river which takes its rise in the Pothundi hills passes through the north-eastern portions of the taluk, and joins the Bharatapuzha at a place called Koottulmukku in the Kaniarkode village. The Vadakkancheri river or thodu, as it is more commonly and rightly called, has its source in the Matchad hills. It flows almost its whole length through this taluk, and discharges its water seventually into the *Kole* lands in the adjoining Trichur Taluk. From its source up to Alur where it ends its course in this taluk, this small mountain stream which dries up in the hot weather is bunded up by ryots at necessary intervals, and the water thus stored is practically the main source of

This river is of very little use from an irrigation point of view. The country through which it passes does not admit of any useful irrigation work being constructed. Further, this is not a perennial stream in the strict sense of the term.

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irrigating the lands on either side of it for the successful raising of *Mundakan* crop. From an agricultural point of view, therefore, the stream has an importance all its own, and although the Bharatapuzha and the Cheerakkuzhi-puzha each bears a volume of water considerably larger than the Vadak-kancheri river, the former are not quite so useful to the ryots as the latter.

5. There are at present, as already stated, many *chiras* in this taluk, both permanent and temporary. The permanent *chiras* and a few of the temporary ones are put up at Sirkar cost, and are annually maintained by the Sirkar. The temporary *chiras* with hardly any exception owe their origin to private enterprise. Till the year 1089 the *chiras* under Sirkar management were maintained by the Department of Public Works. In that year an enquiry was instituted into the several systems and sources of irrigation existing in the taluk, and as a result a more or less complete list of canals, *chiras*, tanks, etc., was prepared. The irrigation works were then classed as Major and Minor according to the extent of lands benefited by them. All works as were found to irrigate an area of 200 acres and upwards were classed as Major, and those that irrigated an extent below 200 acres were classed as Minor. As the Revenue Department was in closer touch with the agricultural population than the Department of Public Works, it was proposed to transfer the supervision of these irrigation works to the Revenue Department, but then the question of professional skill in the execution of works arose, and it was decided to have the major works attended to by the Department of Public Works, the minor works being relegated to the care of the Land Revenue Department. The printed list of the Major and Minor Irrigation works now extant was prepared in connection with that enquiry. There are in this taluk two major and 14 minor works, and the system introduced in 1089 has been found so far to work satisfactorily.

6. But as the existing scheme had its limitations, and as a more extensive and perhaps exhaustive scheme was considered necessary, the present enquiry was ordered, and in result an elaborate and detailed enquiry was instituted, and a more or less complete list has now been drawn up. The list forms an enclosure to this report. In the list is embodied full and fairly accurate information regarding every work therein suggested. But as some of the more important works require detailed explanation, they are dealt with in the following paragraphs.

7. *Protection works.*—Item Nos. 1 to 5 of part I of the list deal with the protection works proposed under the present scheme. Of these, items 1 to 3 relate to the opening of two new canals in continuation of the existing ones. In the sketch, portion A to B called Appithodu abruptly ends in Sy. No. 134 of the Kunnamkulam village. The canal marked N. C. ends at C, As these two canals have their termination in the *padom*, all the water that comes through these canals is dissipated as it were over the *padom* causing inundation. The new canals marked B to M and C to E, if opened, will afford drainage for the excess water which will find its way to the portion called Vettikadavu. An area of 700 acres of *nilom* is estimated to be benefited by this work. Items 4 and 5 relate to the opening of new canals in continuation of the ones already existing. The canal in the Chiramanangad village, takes its source in the Perumbilavu village and ends in Sy. No. 641 of the former village. Another canal of the Vellarakkad village ends in Sy. No. 724 of that village. The volume of water borne by these two canals are dissipated over the *padom* causing inundation. To obviate this evil the proposal is made to open new canals through Sy. No. 641 of Chiramanangad

I have inspected items Nos. 1, 2 and 3. If improved, they will remove the existing defects in the drainage of the *padoms* indicated in the sketch.

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and from Sy. No. 676 to 705 of Vellarakkad. This will make the whole canal a continuous one and excess water that at present has no outlet will find its way through it. These two items of works are calculated to benefit about a hundred acres of *niloms* which are now subject to inundation. Besides this, an area of about 25 acres of single crop *niloms* is likely to be converted into double crop with the aid of the proposed work.

8. *Restoration of old canals.*—By far the most important work proposed under this head is the improvement of Perumthodu (പെരുന്തോട്) in the Kattakampal and Palanji villages. Most of the *niloms* in these two villages are *Kole* lands, and this is the only channel that serves the requirements of both drainage and irrigation for the *Kole* lands in the locality. From a navigation point of view also this *thodu* is important, as it is the means of communication in almost all seasons except summer. This *thodu*, being silted up to a great extent, is now shallow and incapable of holding an adequate volume of water, required for *Puncha* and *Kole* cultivation. It has, therefore, to be silt-cleared and deepened. Next in importance is the Appithodu in Kunnamkulam. Reference has been made to this in para 7 *supra*. This has also to be silt-cleared and deepened.

The canals in Kandanasseri village require to be deepened urgently. I inspected them in last Chingam.

The canals in Kandanasseri, Alur, Chundal and Tirvilluamala come next in the order of importance.—They are invariably in a silted condition. Some of them are even narrow. All these canals are found to be useful for the storage of water required for the *Mundakan* crop. Widening, silt-clearing and deepening are the works that have to be attended to in connection with these canals.

9. *Restoration of old tanks.*—All the tanks now proposed to be repaired with hardly any exception are eminently useful for irrigation, and are the mainstay of the ryot when monsoon fails. They are of various sizes, and some of them such as Kundukulam (കുണ്ടുകുളം) in Palanji, Devichira (ദേവിചിറ) in Thitchur, Ramakulam in Pulakad, Nilichirakulam and Chempankulam (നീലിചിറകുളം) and (ചെമ്പങ്കുളം) in Palayannur, Thamarakulam in Kaniarkode, Malakulam (മാലകുളം) in Kurumala and Kuttitholkulam (കുട്ടിത്തോൾകുളം) in Thonurkara, have an importance all their own from an agricultural point of view. Some of them by virtue of their location irrigate lands in quite a natural manner sparing the ryot the trouble of bailing water out of them. All these tanks call for silt-clearance and deepening. In some cases bunds have to be repaired and strengthened.

10. *New works proposed.*—Under this head comes the following items.—

(a) Opening of new canals.
(b) Digging of new tanks.
(c) Putting up permanent *chiras* and bunds with sluice arrangements.

I shall deal with them one by one.

(a) *Opening of new canals.*—This has been proposed to be done in Kattakampal, Eyyal, Kariannur and Thayyur villages (vide item Nos. 108, 111, 112 and 113). The most important among these are item Nos. 112 and 113, namely, opening of a canal through Sy. No. 517 of the Thayyur village and through Survey Nos. 644 to 685 of the Kariannur village. Irrigation facilities are lamentably wanting in the *padoms* in which these new works are proposed, and the result is that even the *Viruppu* crop is often a failure. This disability is proposed to be removed by diverting water from the main *thodu*, Survey No. 517 of the Thayyur village, by putting up a bund with sluice at the point marked A in the sketch of Survey No. 517 of Thayyur and by opening

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a new canal so as to connect the *thodu* in Survey No. 683 of the Kariannur village. By doing this, water from the main *thodu* in the Thayyur village can be made useful for cultivating the lands in the Kariannur village. The proposed canal in the Eyyal village is calculated to benefit about 50 acres of *nilom*; but, as it would run its course through *pattah* lands, the same will have to be acquired. In the Kattakampal village there is at present a canal as proposed as item No. 6. As the canal is now covered by *pattah*, its acquisition and conversion to *poramboke* seem to be necessary.

(b) *Digging of new tanks.*—New tanks are proposed to be dug in village Nos. 60, 66, 67, 70 and 72. This, in the last resort, will be the only source of water supply.

(c) *Putting up of permanent bunds with sluice arrangements.*—Deepening and providing bunds over the Anakundykayal (ആനകുണ്ടികായൽ is by far the most important item under this head. Survey Nos. 1266 of village No. 1 and 698 of village No. 8 taken together go by the name of Anakundykayal. It forms a compact area covering about 27 acres. In its present condition it does not fully serve the purpose of an irrigation source, as it is not deep enough to hold water sufficient for the cultivation of the *Puncha* and *Kole niloms* in the Mangad and Kattakampal villages that adjoin this *kayal*. An extent of nearly 450 acres of *Kole* lands depend upon the water of this *kayal* for their successful cultivation. It may, therefore, be deepened, and a masonry structure with shutter plank arrangement may be provided at the place where Survey. No. 698 of Mangad meets the Cheruvulli puzha, Survey No. 1 of Anjur. In regard to the other items, it may be generally remarked that they are quite useful for the storage of water for *Mundakan* cultivation.

11. *Pumping arrangements.*—About 450 acres of *niloms* in the Desamangalam and Pallur villages situated on the banks of the Ponnani river are now devoid of proper irrigation facilities except the water in the river. When the river is in floods, these lands are cultivated for short periods, and when the need of water for *Mundakan* cultivation is felt, there will be either no water in the river or what water there, might be in the river will not be within easy reach of the ryots. The water from the Ponnani river can be utilised for irrigation in either of the two ways:—

(1) Diverting river water by means of canals to be newly opened and storing them in big tanks or *Eries* with strong earthen cross bunds in the canals.

(2) Institution of water pumps worked by steam power. Both the above proposals involve heavy expenditure, and the people of two villages *seem to be in favour of the latter proposal as will be found from the petition* presented to the Desamangalath Namburipad by his tenants. The petition under reference with the letter that the Namburipad sent to the Diwan Peishkar is herewith resubmitted. The installation of pumps worked by steam power is a technical matter, and professional opinion may be taken as to howfar, regard being had to the irrigating capacity of the river, &c., the scheme would be successful.

The proposal is well worth giving a trial. The Chief Engineer may be asked to report how far this scheme is feasible.

There is hardly any scope in this taluk for extension of wet cultivation on a large scale. But a few acres here and there, especially on the sides of villages, may be converted into *niloms* by providing facilities for irrigation in the way of digging new tanks and restoring old ones.

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Improvements to wet cultivation in Talappalli Taluk.

Item No.	Description of scheme.	Amount Rs.
	Kunnamkulam Firkah.	
1	Opening a new canal in continuation of IV C (vide Kunnamkulam sketch as far as C D).	These three items form one project and special investigation is necessary.
2	Continuation of a new canal in continuation of Appithode marked A B in the sketch.	
3	Opening a new canal as marked D E in the sketch Survey Nos. 174 to 283.	
	Nelluvaye Firkah.	
4	Opening a new *thodu* through Sy. No. 64	200
5	Opening a new canal from Sy. Nos. 705 to 676	1,500
	Kunnamkulam Firkah.	
6	Opening a new canal from Sy. Nos. 809 to 424	100
7	Repairing tank Sy. No. 449	1,100
8	Deepening the canal Sy. Nos. 1413 to 952	750
9	do Sy. Nos. 1413 to 1229	500
10	Repairing tank (clearing silt) Sy. No. 342	1,300
11	Deepening the canal Sy. Nos. 871 to 1012	150
12	Repairing tank (clearing silt) Sy. No. 92	1,300
13	do do 524	700
14	do do 77/2	250
15	do do 513	1,300
16	do do 368	250
17	do do 204	350
18	do do 590	1,000
19	do and masonry do 645	2,250
20	do do 256	1,000
21	do Appithode Sy. Nos. 1346 to 1153 (clearing silt and masonry)	1,000
22	Repairing canal Sy. Nos. 791, 824/1, 835, 836, 840, 870 and 973	600
23	Repairing tank Sy. No. 442 ...	1,000
24	do canal Sy. Nos. 802 to 605 ...	350
25	do do 676 to 1218 ..	500
26	do tank Sy. No. 501 ...	350
27	do do 1810 ...	700
28	Deepening canal Sy. Nos. 567 to 577 ...	250
29	Repairing tank Sy. No. 808 ...	1,300
30	Putting up a bund with sluice arrangement Sy. No. 811	1,000
31	Deepening *thodu* Sy. No. 305 to 780 ...	[illegible]
	Nelluvaye Firkah.	
32	Repairing tank Sy. No. 542/3 ...	[illegible]
33	do do 1155 ...	2,000
34	do do 1151/3 ...	500
35	do do 238 ...	1,250
36	do do 278 ..	1,000
37	do do 744 ...	2,000
38	Putting up masonry bund with sluice at the place marked in the sketch, i. e., Sy. No. 225 ...	4,500
39	Repairing tank Sy. No. 350 ...	6,000

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Item.	Description of scheme.	Amount.
		Rs.
40	Repairing tank in Sy. No. 178 ..	2,000
41	do do 643 ..	4,000
42	Putting a masonry bund with sluice at the place marked in the sketch Sy. No. 331 ...	3,000
43	Putting up masonry bund with sluice at place marked, Sy. No. 256 ...	3,000
44	do do 426 ...	3,000
45	do do 490 ...	3,000
46	Repairing tank in Sy. No. 539 ..	3,000
47	do do 114 ...	3,000
48	do do 129 ...	3,000
49	do do 154 ...	4,000
50	do do 1174/4 ...	1,000
51	do do 321 ...	2,000
52	do do 877 ...	1,500
53	do do 750 ...	4,000
54	do do 396/1 ...	1,000
55	do do 354 ...	4,000
56	do do 406 ..	3,000
57	do do 42 ..	3,000
58	do do 107 ...	2,000
	Mullurkara Firkah.	
59	*Chira* with sluice in Sy. No. 334 ...	3,000
60	do do 549 ...	3,000
61	do do 586 ...	3,000
62	Repairing tank do 125 ...	350
63	do do 523/1 and 2 ...	500
64	do canal Sy. Nos. 187, 188, 217, 220, 232, 233, 317, 324, 334, 549, 566 and 586 ...	10,000
65	*Chira* with sluice in Sy. Nos. 5 and 9 ...	4,000
66	do do 757 ...	4,000
67	Repairing tank in Sy. No. 223/2 ..	350
68	*Chira* with sluice in Sy. Nos. 35 and 36 ...	1,500
69	do adjoining Sy. No. 717 ...	2,500
70	do on side of Sy. No. 57 in Sy. No. 60 ...	2,500
71	do do 704	2,250
72	Repairing tank in Sy. No. 707 ...	400
73	Opening a waterway through Sy. No. 313 ...	1,000
74	*Chira* with sluice in Sy. No. 250 ...	5,000
75	Opening of the mouth of the canal Sy. No. 250 and deepening same	Special investigation required
76	*Chira* with sluice in Sy. No. 721 ..	3,000
77	do do 300 ...	4,500
78	do do 613 ...	4,000
	Palayannur Firkah.	
79	Sinking new tanks in Sy. No. 1114 ...	3,600
80	Repairing tank in Sy. No. 49 ...	5,250
81	do do 824 ...	500
82	do do 50 ...	3,000
83	do do 130 ...	3,000
84	do do 444 ...	600
85	do do 727 ...	1,000

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Item	Description of scheme.			Amount
				Rs.
86	Repairing tank in Survey No. 167		...	600
87	Sinking new tanks in Sy. No. 237		...	3,700
88	do	do 293 and 563	...	2,000
89	Repairing tank	do 262	...	1,500
90	do	do 73	...	13,000
91	Sinking new tanks in Sy. No. 1311-2 tanks each		...	3,500
92	Repairing tank in Sy. No. 174		...	750
93	do	do 544	...	1,500
94	do	do 618	...	1,000
95	do	do 1364	...	1,500
96	do	do 1677	...	2,250
97	do	do 496	...	850
98	do	do 162	...	200
99	do	do 416	...	1,750
100	Deepening of the canal Sy. Nos. 687, 690, 623		...	3,250
101	Repairing tank in Sy. No. 192		...	2,250
102	Sinking new tanks in Sy. No. 975		...	3,250
103	Repairing tank in Sy. No. 763		...	750
104	do	do 760	...	1,500
105	Deepening of the canal Sy. Nos. 210 and 212		...	2,800
106	Sinking a new tank in Sy. No. 1319		...	3,250
107	Deepening of the canal Sy. Nos. 335 to 1666		...	Special investigation required.

Kunnamkulam Firkah.

108	Deepening the Anakundikayal and putting a masonry contraction with sluice arrangements at the place where Sy. No. 698 of Mangad village meets with Cheruvallipuzha Sy. No. 1266	...	2,000
109	do Sy. No. 698		
110	Extension of canal in Sy. Nos. 1091, 1020 and 1024	...	100
111	Opening of a new canal from Sy. Nos. 538 to 553	...	100

Nelluvaye Firkah.

112	Opening of a new canal through Sy. Nos. 644, 645, 647, 658, 659, 670, 672, 679, 682 and 683 to 685	...	800
113	Putting up a bund with sluice arrangements in Sy. No. 517 of Tayyur at the place marked A	...	300

Mullurkara Firkah.

114	Putting up a strong bund in Sy. No. 825	Special investigation required.
115	Institution of a water pump in Bharathapuzha Sy. No. 69	
116	do do 628	

Palayannur Firkah.

117	Putting up of a permanent bund with shutter planks and sluice in canal Sy. Nos. 556 and 562	...	7,500
118	do do 109 to 164	...	5,000
119	do do 210 to 211	...	5,000
120	do do 151	...	5,000

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Report C. 1336/1092, dated 11th August 1917 from the Chief Engineer.

In returning herewith the enclosures forwarded with the P. W. Department Endt. on C. No. 644/92, dated 10th April 1917, *re*: improvements to wet cultivation in the Talappalli Taluk, I have the honour to report that I endorse the Diwan Peishkar's remarks on the proposals made by the Talappalli Tahsildar.

2. Of the 120 schemes dealt with by the Tahsildar, items 1, 2, 3, 75, 107, 114, 115 and 116 may be reserved for investigation by the special staff. A statement showing the approximate cost of the remaining works is enclosed for the Diwan's perusal and orders.

3. With regard to the pumping arrangements referred to in para 11 of the Tahsildar's report, I have the honour to observe that the lifts would be considerable and cost therefore heavy. I think, however, that wind mills would pay or Crude Petrol or Still engines of the improved semi-Dese type. Steam would be prohibitive.

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